

PS Example 1; Fig 8; 82pp; English.

CC The present invention relates to a method for screening for a ligand
 CC analog, comprising adding a candidate ligand to a non-naturally occurring
 CC cell surface receptor analog e.g. erythropoietin receptor (EPOR), and
 CC determining the binding of the ligand to the analog. The present sequence
 CC is a mature human erythropoietin receptor (EPOR) extracellular domain.
 CC Protein Design Automation was carried out on the present sequence, so
 CC that it may be used in the present invention as a cell surface receptor
 CC analog.

SO Sequence 211 AA:

Query Match 96.5%; Score 1060; DB 21; Length 211;
 Best Local Similarity 93.8%; Pred. No. 2e-106;
 Matches 198; Conservative 11; Mismatches 2; Indels 0; Gaps 0;

QY 1 KRESKALLAARPEELLFETTERLEDLVCFEEAASAGVPGNFSPQLEDEPWKLCRL 60
 DB 1 KESKALLAARPEELLFETTERLEDLVCFEEAASAGVPGNFSPQLEDEPWKLCRL 60
 QY 61 HOAPTARGAIRFWCSLPPTADTSFVPLELRLTAASGAPRHRVTHINEVLLDAPYGLVA 120
 DB 61 HQAPTARGAIRFWCSLPPTADTSFVPLELRLTAASGAPRHRVTHINEVLLDAPYGLVA 120
 QY 121 RLADSGHVIVRWLPPEPTPMTSHIRFELDISANGAGSVQVRELLEGRTCYLSNLGR 180
 DB 121 RLADSGHVIVRWLPPEPTPMTSHIRFELDISANGAGSVQVRELLEGRTCYLSNLGR 180
 QY 181 TRITIAVRARMAEPSPFGFMSAMSEPVSLIT 211
 DB 181 TRYTFIVARRMAEPSPFGFMSAMSEPVSLIT 211

RESULT 2

AAB21685
 ID AAB21685 standard; peptide: 225 AA.

AC AAB21685;
 XX
 DT 21-DEC-2000 (first entry)

DE Human mature erythropoietin receptor EPOR extracellular domain #1.

XX Ligand; cell surface receptor; erythropoietin; EPOR; human.

OS Homo sapiens.

PN WO200047612-A2.

XX 17-AUG-2000.

PD 11-FEB-2000; 2000WO-US03665.

PF 11-FEB-1999; 99US-0120009.

PR 29-APR-1999; 99US-0131674.

XX (XENC-) XENCOR INC.

PA Luo P, Dahljat B;

PI WPI: 2000-549135/50.

XX Screening for ligand analogs and agents which modulate ligand-receptor
 PT binding, comprises adding a test ligand to a non-naturally occurring
 PT cell surface receptor analog -

PS Example 1; Fig 8; 82pp; English.

CC The present invention relates to a method for screening for a ligand
 CC analog, comprising adding a candidate ligand to a non-naturally occurring
 CC cell surface receptor analog e.g. erythropoietin receptor (EPOR), and

CC determining the binding of the ligand to the analog. The present sequence
 CC is a mature human erythropoietin receptor (EPOR) extracellular domain.
 CC This sequence may be used in the present invention as a cell surface
 CC receptor analog.

SO Sequence 225 AA:

Query Match 96.5%; Score 1060; DB 21; Length 225;
 Best Local Similarity 93.8%; Pred. No. 2.2e-106;
 Matches 198; Conservative 11; Mismatches 2; Indels 0; Gaps 0;

QY 1 KRESKALLAARPEELLFETTERLEDLVCFEEAASAGVPGNFSPQLEDEPWKLCRL 60
 DB 10 KESKALLAARPEELLFETTERLEDLVCFEEAASAGVPGNFSPQLEDEPWKLCRL 69
 QY 61 HOAPTARGAIRFWCSLPPTADTSFVPLELRLTAASGAPRHRVTHINEVLLDAPYGLVA 120
 DB 70 HQAPTARGAIRFWCSLPPTADTSFVPLELRLTAASGAPRHRVTHINEVLLDAPYGLVA 129
 QY 121 RLADSGHVIVRWLPPEPTPMTSHIRFELDISANGAGSVQVRELLEGRTCYLSNLGR 180
 DB 130 RLADSGHVIVRWLPPEPTPMTSHIRFELDISANGAGSVQVRELLEGRTCYLSNLGR 189
 QY 181 TRITIAVRARMAEPSPFGFMSAMSEPVSLIT 211
 DB 190 TRYTFIVARRMAEPSPFGFMSAMSEPVSLIT 220

RESULT 3

AA444622
 ID AA444622 standard; Protein: 438 AA.

AC AA444622;

DT 07-APR-2000 (first entry)

DE Truncated human EPOR(t439).

XX Truncated human EPOR; erythropoietin receptor; hypersensitive EPOR(t439);
 KW mutant human EPOR; EPOR signaling; cancer; infectious disease; HIV;

KW sickle cell anemia; cytostatic; antimicrobial; antiviral;

KW immunostimulant; anti-anaemic.

OS Homo sapiens.

PN WO967360-A2.

XX 29-DEC-1999.

PD 25-JUN-1999; 99WO-CA00606.

PF 25-JUN-1998; 98CA-2241576.

PR 25-JAN-1999; 99CA-2260332.

XX (HEMO-) HEMOSOL INC.

PA Bell D, Matthews KE, Mueller SG;

PI WPI: 2000-136979/12.

DR P-PSDB; AA449634.

XX Serum free defined medium useful for the efficient culture of stem
 PT cells used for production of hemoglobin -
 PT Example 6; Fig 9; 61pp; English.

CC The present sequence is truncated human EPOR (erythropoietin receptor).
 CC transfection of constitutively active EPOR(t439) by electroporation into
 CC a cytokine-dependent cell line supports cell population expansion in the
 CC absence of exogenous cytokines. Mutant human EPOR is used in treatment of
 CC disorders related to inadequate EPOR signaling. The transfected cells
 CC may also used in gene therapy to treat cancer, infectious diseases

CC (e.g. HIV), sickle cell anaemia, and conditions related to abnormal
 CC expression of erythropoietin.
 XX
 SO Sequence 438 AA;

Query Match 96.5%; Score 1060; DB 21; Length 438;
 Best Local Similarity 93.8%; Pred. No. 5.1e-106;
 Matches 198; Conservative 11; Mismatches 2; Indels 0; Gaps 0;

QY 1 KFSKALLAARPEELCTERLEEDLVCFEEAASAGVPGNFSFQLEDEPMKLCRL 60
 DB 34 kfeskaallaaargpeellcterledlvcfweaasagvpgnysfsyqledepwKicrl 93

QY 61 HOAPTARGAIFWCSLPTADTSSFVPLELRLTAASGAPRHRVYIHINEVVLDAVGLVA 120
 DB 94 hgaprtargavrfwcsLptadtsfvpLeLrlvtaasgaprhrvYihinevVlldavpGlva 153

QY 121 RLADSGHVIVRWLPPPEPTMTSHIRFELDISAGNGAGSVORVELLEGRTCYLSNLRGR 180
 DB 154 rladesghvIvrlwLpppeptmtshirFeldisAGngagSVorVellegrTCyLSnlrgr 213

QY 181 TRITIAVRARMAEPSPFGFMSANSEVSLIT 211
 DB 214 trytlavrarmaePsfGfgfmsawsepsVslit 244

RESULT 4
 AAM08349 standard; Protein; 488 AA.
 XX
 AC AAM08349;
 XX
 DT 14-MAR-1997 (first entry)
 XX
 DE Eporfc fusion protein.
 XX
 DE Receptor agonist; antibody; erythropoietin receptor; Epor;
 KM immunogen; antigen; metallochionein; promoter; IgG1; Fc;
 KW anaemia; therapy.
 XX
 OS Chimeric Homo sapiens;
 OS Chimeric synthetic.
 XX
 FH Key Location/Qualifiers
 FT Domain 1..250
 FT /label= Epor-ECD
 FT /note= "erythropoietin receptor extracellular
 FT domain"
 FT Cleavage-site 251..254
 FT /note= "Factor Xa cleavage site"
 FT Domain 255..488
 FT /label= Fc
 FT /note= "human IgG1 Fc sequence"
 XX
 PN WO9640231-A1.
 XX
 PD 19-DEC-1996.
 XX
 PF 07-JUN-1996; 96WO-US09613.
 XX
 PR 07-JUN-1995; 95US-0474673.
 XX
 PA (SMK) SMITHKLINE BEECHAM CORP.
 XX
 PI Erickson-Miller CL, Young PR;
 XX
 DR WPI; 1997-051900/05.
 DR N-PSDB; AAT48800.
 XX
 PT Recombinant immunogen corresp. to dimeric form of a receptor - used
 PT for generating antibodies able to act as receptor agonists, esp. of
 PT erythropoietin receptor for treating anaemia

XX
 PS Example 1; Page 39-41; 83pp; English.
 XX
 CC A fusion protein (AAM08349) encoded by plasmid mta1sEporfc (AAT48800)
 CC comprises the human erythropoietin receptor (Epor) extracellular
 CC domain fused (via a Factor Xa cleavage sequence) to the Fc portion
 CC of human IgG1. It can be expressed e.g. in transfected Drosophila
 CC S2 cells upon induction with copper sulphate. The cells secrete
 CC Eporfc as a dimeric molecule due to the affinity of the Fc moiety
 CC for itself. The dimeric receptor can be used as an immunogen to
 CC generate antibodies (monoclonal, polyclonal, chimeric, humanised)
 CC able to act as Ecor agonists for use in treatment of anaemia.
 XX
 SO Sequence 488 AA;

Query Match 96.5%; Score 1060; DB 18; Length 488;
 Best Local Similarity 93.8%; Pred. No. 5.9e-106;
 Matches 198; Conservative 11; Mismatches 2; Indels 0; Gaps 0;

QY 1 KFSKALLAARPEELCTERLEEDLVCFEEAASAGVPGNFSFQLEDEPMKLCRL 60
 DB 34 kfeskaallaaargpeellcterledlvcfweaasagvpgnysfsyqledepwKicrl 93

QY 61 HOAPTARGAIFWCSLPTADTSSFVPLELRLTAASGAPRHRVYIHINEVVLDAVGLVA 120
 DB 94 hgaprtargavrfwcsLptadtsfvpLeLrlvtaasgaprhrvYihinevVlldavpGlva 153

QY 121 RLADSGHVIVRWLPPPEPTMTSHIRFELDISAGNGAGSVORVELLEGRTCYLSNLRGR 180
 DB 154 rladesghvIvrlwLpppeptmtshirFeldisAGngagSVorVellegrTCyLSnlrgr 213

QY 181 TRITIAVRARMAEPSPFGFMSANSEVSLIT 211
 DB 214 trytlavrarmaePsfGfgfmsawsepsVslit 244

RESULT 5
 AAB13012 standard; Protein; 503 AA.
 XX
 AC AAB13012;
 XX
 DT 08-DEC-2000 (first entry)
 XX
 DE Q-tagged erythropoietin (Epo) receptor protein.
 XX
 DE Site specific label; detection; interaction screening; transglutaminase;
 KM erythropoietin receptor; Epo.
 KW
 XX
 OS Synthetic.
 XX
 PN WO200043492-A2.
 XX
 PD 27-JUL-2000.
 XX
 PF 20-JAN-2000; 2000WO-US01481.
 XX
 PR 22-JAN-1999; 99US-0117327.
 XX
 PA (SMK) SMITHKLINE BEECHAM CORP.
 XX
 PI Tew DG, Powell DJ, Meek TD, Chen W;
 XX
 DR WPI; 2000-499222/44.
 XX
 PT Screening for a candidate compound for use in bioassays comprises
 PT contacting the candidate molecule with a labelled modified protein and
 PT detecting the label to identify interaction of the two molecules -
 XX
 PS Example 4; Page 26; 49pp; English.
 XX
 CC This invention relates to methods for the site specific modification of

XX PS Disclosure; Page 27-29; 42pp; English.
XX CC The full-length erythropoietin receptor (EPO-R) is given.
CC CC Extracellular domains are expressed from vector plasmid pEX-2T as
CC CC fusion proteins with glutathione-S-transferase. The domains are
CC CC used for investigating the structure of the EPO-R and for
CC CC identifying factors involved in regulating differentiation and
CC CC proliferation mechanisms in erythroid progenitor cells. They can
CC CC also be used for identifying and quantitating EPO and EPO-R as well
CC CC as in understanding haematopoietic malignancy and some
CC CC cardiovascular system disorders.
XX CC
XX CC
SQ Sequence 508 AA;

Query Match 96.5%; Score 1060; DB 16; Length 508;
Best Local Similarity 93.8%; Pred. No. 6.2e-106;
Matches 198; Conservative 11; Mismatches 2; Indels 0; Gaps 0;

QY 1 KFSKAAALLAARGPEELLCTERLEDLVCFEEAASAGVGPNGFSPQLEDEPMKICRL 60
DB 34 KfskaalllaargpeellcterleedlvcfweeaaagvpgnysfsyqledepwKicrl 93
QY 61 HQAPARGAIRFWCSLPRTADTSSFPVLELRLTAASGAPRFRHYIHINEVLLDAPYGLVA 120
DB 94 hqapargavrfwcsiprtadtsfvpelrltrtaasgapryhrvihnervlldapvglyva 153
QY 121 RLADSGHVIRMLPPPEPMTSHIRFELDISAGNGAGSVQRYELLEGRTECVLSMLRGR 180
DB 154 rladesghvirlwlppecpmtshirfyevdvasngagsvqrvellegrtcvlsmlrgr 213
QY 181 TRTIVARRAMAPSPFGFWSAMSEPVSLIT 211
DB 214 trytlavarramaepsfgfwsawsepvslit 244

RESULT 8
AAR69503
ID AAR69503 standard; Protein; 508 AA.
XX AC AAR69503;
XX DT 11-AUG-1995 (first entry)
XX XX
XX DE Human erythropoietin receptor.
XX KW Erythropoietin receptor; anemia therapy; diagnostic.
XX OS Homo sapiens.
XX XX
XX FT Key Location/Qualifiers
XX FT Peptide 1..24
XX FT Protein /note= "signal peptide"
XX FT Protein 25..508
XX FT Protein /note= "mature protein"
XX FT Modified-site 76..79
XX FT FT /note= "N-glycosylation site"
XX FT FT 251..272
XX FT FT /note= "transmembrane region"
XX XX
XX PN US5378808-A.
XX XX
XX PD 03-JAN-1995.
XX XX
XX PF 03-FEB-1989; 890S-0306503.
XX XX
XX PR 03-FEB-1989; 890S-0306503.
XX PR 25-MAR-1991; 910S-0678877.
XX PR 10-JUN-1993; 930S-0075069.
XX XX
XX PA (GENM) GENETICS INST INC.
XX XX

PI D'andrea A, Jones SS, Wong GC;
XX XX
XX DR MPI: 1995-051310/07.
XX DR N-PSDB: AAQ81892.
XX XX
XX PT New recombinant erythropoietin receptor polypeptide(s) - used for
XX PT detection, purification, and therapy and for prodn. of antibodies for
XX PT detection and therapy
XX PS Claim 2; Fig 9; 24pp; English.
XX PS
XX CC The sequence is that of a 55-kDa human erythropoietin receptor. The
XX CC receptor polypeptide may be used in purification and detection of
XX CC erythropoietin, and in production of antibodies for anemia therapy.
XX CC The polypeptide may also be used for treating individuals
XX CC who are hypersensitive to erythropoietin or who have elevated
XX CC erythropoietin levels. They may be used in therapy of e.g. primary
XX CC or secondary proliferative polycythemia.
XX CC
XX CC
SQ Sequence 508 AA;

Query Match 96.5%; Score 1060; DB 16; Length 508;
Best Local Similarity 93.8%; Pred. No. 6.2e-106;
Matches 198; Conservative 11; Mismatches 2; Indels 0; Gaps 0;

QY 1 KFSKAAALLAARGPEELLCTERLEDLVCFEEAASAGVGPNGFSPQLEDEPMKICRL 60
DB 34 KfskaalllaargpeellcterleedlvcfweeaaagvpgnysfsyqledepwKicrl 93
QY 61 HQAPARGAIRFWCSLPRTADTSSFPVLELRLTAASGAPRFRHYIHINEVLLDAPYGLVA 120
DB 94 hqapargavrfwcsiprtadtsfvpelrltrtaasgapryhrvihnervlldapvglyva 153
QY 121 RLADSGHVIRMLPPPEPMTSHIRFELDISAGNGAGSVQRYELLEGRTECVLSMLRGR 180
DB 154 rladesghvirlwlppecpmtshirfyevdvasngagsvqrvellegrtcvlsmlrgr 213
QY 181 TRTIVARRAMAPSPFGFWSAMSEPVSLIT 211
DB 214 trytlavarramaepsfgfwsawsepvslit 244

RESULT 9
AAR47518
ID AAR47518 standard; Protein; 508 AA.
XX AC AAR47518;
XX DT 24-JUN-1994 (first entry)
XX XX
XX DE Human EPO receptor.
XX KW Erythropoietin receptor; recombinant; murine; anaemia.
XX OS Homo sapiens.
XX XX
XX FT Key Location/Qualifiers
XX FT Peptide 1..24
XX FT Protein /note= "signal peptide"
XX FT Protein 25..508
XX FT Protein /note= "mature EPO receptor"
XX FT FT 251..272
XX FT FT /note= "putative transmembrane domain"
XX XX
XX PN US5278065-A.
XX XX
XX PD 11-JAN-1994.
XX XX
XX PF 03-FEB-1989; 890S-0306503.
XX XX
XX PR 03-FEB-1989; 890S-0306503.
XX PR 25-MAR-1991; 910S-0678877.
XX PR

XX (CHIL-) CHILDRENS MEDICAL CENT.
 PA (GEM) GENETICS INST INC.
 PA (WHED) WHITEHEAD INST BIOMEDICAL RES.
 XX
 PI D'andrea A, Jones SS, Wong GG;
 XX
 DR WPI; 1994-025409/03.
 DR N-PSDB; AA053995.
 XX
 PT Recombinant DNA encoding erythropoietin receptor - used to
 PT develop prods. for study, treatment or diagnosis of disorders in
 PT which receptor is dysfunctional
 XX
 PS Disclosure; Fig 9; 24pp; English.
 XX
 CC Mouse erythroleukaemia (MEL) cells were used to construct a cDNA
 CC library. The cDNA was used to transfect COS-1 cells and these were
 CC screened for radioiodinated erythropoietin (EPO) binding to isolate
 CC cDNA encoding the EPO receptor. This cDNA was used as a probe to
 CC screen a human genomic cDNA library to obtain DNA encoding the human
 CC EPO receptor. The cDNA may be used to study, treat or diagnose
 CC disorders in which the EPO receptor is dysfunctional. The EPO
 CC receptor may also be used to raise antibodies or for treating
 CC hypersensitivity to EPO or who have elevated levels of EPO. The prod.
 CC is pref. used for treating anaemias, primary proliferative polycythemia
 CC and secondary polycythemia.
 CC See also AAR47517.
 XX
 SQ Sequence 508 AA;

Query Match 95.9%; Score 1053; DB 15; Length 508;
 Best Local Similarity 92.9%; Pred. No. 3.6e-105;

Matches 196; Conservative 12; Mismatches 3; Indels 0; Gaps 0;

OY 1 KFESKALALARGPEELCTERLEDVCFEEBAASAGVPGNFSFQLEDEPWKLCRL 60
 Db kfskaalllaargpeelcterledvctfweeasagvpgnysfsgyledepwkrlcl 93
 OY 61 HQAPTARGAIRFMCSTPTADTSSFPVLELRITAASGAPRRHRYIHNEVLLDAPVGLVA 120
 Db hqaptargairfmcstptadtsfpvlelrvtaasgaprrhryihnevllldapvglva 153
 OY 121 RLADSGHVIRMLPPETPMTSHIRPELDISAGNGAGVQRYELLEGRTECVLSNLRGR 180
 Db rldesghvirlwlppeptmtshirpeldisagngagvqryellegrtecvlsnllgr 213
 OY 181 TRITIAVARMAEPSEFGFSAMSEPVSLT 211
 Db tritfavarmaepsfgfswsepsvslt 244

RESULT 10

AAI44623
 ID AAY44623 standard; Protein; 438 AA.

XX
 AC AAY44623;

DT 07-APR-2000 (first entry)

DE R154C truncated human EpOR(t439).

XX Truncated human EpOR: erythropoietin receptor; hypersensitive EpOR(t439);

KW mutant human EpOR; EpOR signaling; cancer; infectious disease; HIV;

KW sickle cell anaemia; cytostatic; antimicrobial; antiviral;

XX immunostimulant; anti-anaemic.

OS Homo sapiens.

XX
 FH Key Location/Qualifiers
 FT Misc-difference 154

/note- "Wild type Arg substituted by Cys"

XX
 PN WO967360-A2.
 XX
 PD 29-DEC-1999.
 XX
 PE 25-JUN-1999; 99MO-CA00606.
 XX
 PR 25-JUN-1998; 98CA-2241576.
 PR 25-JAN-1999; 99CA-2260332.
 XX
 PA (HEMO-) HEMOSOL INC.
 XX
 PI Bell D, Matthews KE, Mueller SG;
 XX
 DR WPI; 2000-136979/12.
 DR N-PSDB; AA49636.
 XX
 PT Serum free defined medium useful for the efficient culture of stem
 PT cells used for production of hemoglobin -
 XX
 PS Example 6; Fig 10; 61pp; English.
 XX
 CC The present sequence is R154C truncated human EpOR (erythropoietin
 CC receptor). Transfection of constitutively active EpOR(t439; R154C) by
 CC electroporation into a cytokine-dependent cell line supports cell
 CC population expansion in the absence of exogenous cytokines. Mutant human
 CC EpOR is used in treatment of disorders related to inadequate EpOR
 CC signaling. The transfected cells may also be used in gene therapy to treat
 CC cancer, infectious diseases (e.g. HIV), sickle cell anemia, and
 CC conditions related to abnormal expression of erythropoietin.
 XX
 SQ Sequence 438 AA;

Query Match 95.8%; Score 1052; DB 21; Length 438;
 Best Local Similarity 93.4%; Pred. No. 3.8e-105;

Matches 197; Conservative 11; Mismatches 3; Indels 0; Gaps 0;

OY 1 KFESKALALARGPEELCTERLEDVCFEEBAASAGVPGNFSFQLEDEPWKLCRL 60
 Db kfskaalllaargpeelcterledvctfweeasagvpgnysfsgyledepwkrlcl 93
 OY 61 HQAPTARGAIRFMCSTPTADTSSFPVLELRITAASGAPRRHRYIHNEVLLDAPVGLVA 120
 Db hqaptargairfmcstptadtsfpvlelrvtaasgaprrhryihnevllldapvglva 153
 OY 121 RLADSGHVIRMLPPETPMTSHIRPELDISAGNGAGVQRYELLEGRTECVLSNLRGR 180
 Db rldesghvirlwlppeptmtshirpeldisagngagvqryellegrtecvlsnllgr 213
 OY 181 TRITIAVARMAEPSEFGFSAMSEPVSLT 211
 Db tritfavarmaepsfgfswsepsvslt 244

RESULT 11

AAR50326
 ID AAR50326 standard; Protein; 265 AA.

XX
 AC AAR50326;

DT 19-OCT-1994 (first entry)

DE Mouse soluble EPO receptor protein fragment.

XX Murine; soluble; erythropoietin; EPO; receptor protein; sEPO-R; drug;

KW antigen; diagnostic agent; biochemical reagent.

XX Mus musculus.

XX
 FH Key Location/Qualifiers
 FT Peptide 1..25

/note- "Signal peptide"

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FT Protein 26..265
FT /note="Mature EPO-R fragment"
XX
XX JP06038787-A.
XX
XX 15-FEB-1994.
XX
XX 04-MAR-1992; 92JP-0082865.
XX
XX 04-MAR-1992; . 92JP-0082865.
XX
XX (SNOW ) SNOW BRAND MILK PROD CO LTD.
XX
XX WPI; 1994-094847/12.
XX
XX N-PSDB; AAQ44853.
XX
XX Soluble erythropoietin receptor protein - and DNA coding for
PT SEPO-R, useful as diagnostic reagent
XX
XX Disclosure; Page 5-6; 9pp; Japanese.
XX
XX This sequence represents a fragment of the murine soluble erythro-
CC poietin (EPO) receptor protein (SEPO-R). This protein is able to
CC bind to EPO and has antigenicity as an EPO receptor. The molecular
CC weight of the full length protein is pref 33 or 29 kD. The protein
CC is useful as a drug, as a diagnostic agent and a biochemical reagent.
XX
XX Sequence 265 AA:

Query Match 79.2%; Score 869.5; DB 15; Length 265;
Best Local Similarity 77.7%; Pred. No. 1.1e-85;
Matches 164; Conservative 22; Mismatches 24; Indels 1; Gaps 1;

QY 1 KFSKALLAARPEELCTERLEDLVCFEEAASAGVGPGMPSFOLEDEPMKLCRL 60
DB 34 kfskaalllasrgseellctqrlcdlvctweaasgmdfnysfsyqlgesrkscl 92
QY 61 HQAPFARGAIRFWCSLPTADTSSFPLELRRTAASGAPRFRHYIHNEVLLDAPYGLVA 120
DB 93 hgapfvrgrsvrfwscslptadtsfvpelqvtasgspryhrilhnnevlldapaglla 152
QY 121 RLADSGHVIVRWLPPETPMTSHIRFELDLSAGNGASVQRYVELLGRTECVLSNLRGR 180
DB 153 rlaeegshvrlwlppegpamthiryevdvsagrnragtgrvevlegreecvlsnrlrg 212
QY 181 TRITIAVRAMAPSPFGGFWMSAMSEPSLIT 211
DB 213 trytfavarmapsfsgfwmsawsepasilt 243

RESULT 12
ID AAR06511 standard; protein; 507 AA.
XX
XX AAR06511;
XX
XX 04-JUN-1991 (first entry)
XX
XX EPO receptor sequence deduced from DNA of clone 190.
XX
XX Erythropoietin; Diamond Blackfan anaemia; polycythemia vera.
XX
XX Mus musculus.
XX
XX Key Location/Qualifiers
XX FH 1..24
XX FT /label=signal peptide
XX FT 25..248
XX FT /label=extracellular domain
XX FT /note=EPO binding region
XX FT 248..271
XX FT /label=transmembrane domain

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FT Domain 272..507
FT /label=intracellular domain
FT Modified-site 75..77
FT /label=N-linked_glycos
FT Modified-site 182..184
FT /label=N-linked_glycos
XX
XX WO9008822-A.
XX
XX 09-AUG-1990.
XX
XX 01-FEB-1990; 90WO-US00635.
XX
XX 03-FEB-1989; 89US-0306503.
XX
XX (GENE-) GENETICS INST INC.
XX (WHIT-) WHITEHEAD INST.
XX
XX D'andrea A, Wong G;
XX
XX WPI; 1990-260931/34.
XX
XX N-PSDB; AAQ05747.
XX
XX Erythropoietin receptor and gene - used for developing reagents
PT and systems to control and study erythropoiesis.
XX
XX Disclosure; Fig 1; 53pp; English.
XX
XX The sequence was deduced from DNA from a clone isolated from a
CC CDNA library prep. from uninduced murine erythroleukemia cells.
CC It is a type I transmembrane protein with binding affinity for EPO.
CC The gene and recombinant EPO receptor produced on expression of
CC the DNA are used to develop reagents and systems to control and
CC study erythropoiesis. It is believed that the EPO receptor is
CC dysfunctional in individuals with Diamond Blackfan anaemia, and
CC may be hyperactive in polycythemia vera.
XX See also AAR06512 (human EPO receptor).
XX
XX Sequence 507 AA:

Query Match 79.2%; Score 869.5; DB 11; Length 507;
Best Local Similarity 77.7%; Pred. No. 2.5e-85;
Matches 164; Conservative 22; Mismatches 24; Indels 1; Gaps 1;

QY 1 KFSKALLAARPEELCTERLEDLVCFEEAASAGVGPGMPSFOLEDEPMKLCRL 60
DB 34 kfskaalllasrgseellctqrlcdlvctweaasgmdfnysfsyqlgesrkscl 92
QY 61 HQAPFARGAIRFWCSLPTADTSSFPLELRRTAASGAPRFRHYIHNEVLLDAPYGLVA 120
DB 93 hgapfvrgrsvrfwscslptadtsfvpelqvtasgspryhrilhnnevlldapaglla 152
QY 121 RLADSGHVIVRWLPPETPMTSHIRFELDLSAGNGASVQRYVELLGRTECVLSNLRGR 180
DB 153 rlaeegshvrlwlppegpamthiryevdvsagrnragtgrvevlegreecvlsnrlrg 212
QY 181 TRITIAVRAMAPSPFGGFWMSAMSEPSLIT 211
DB 213 trytfavarmapsfsgfwmsawsepasilt 243

RESULT 13
ID AAR47517 standard; protein; 507 AA.
XX
XX AAR47517;
XX
XX 24-JUN-1994 (first entry)
XX
XX MEL EPO receptor.
XX
XX Erythropoietin receptor; recombinant; murine; anaemia.

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XX OS Mus musculus.
XX XX
XX FH Key Location/Qualifiers
XX FT Peptide 1..24
XX FT Protein /note= "signal"
XX FT Modified-site 25..507
XX FT Modified-site /note= "mature EPO receptor"
XX FT Modified-site /note= "potential N-glycosylation site"
XX FT Region /note= "potential N-glycosylation site"
XX FT /note= "putative transmembrane region"
XX PN US5278065-A.
XX XX
XX PD 11-JAN-1994.
XX PF 03-FEB-1989; 89US-0306503.
XX PR 03-FEB-1989; 89US-0306503.
XX PR 25-MAR-1991; 91US-0678877.
XX PA (CHIL-) CHILDRENS MEDICAL CENT.
XX PA (GEM ) GENETICS INST INC.
XX PA (WHE ) WHITEHEAD INST BIOMEDICAL RES.
XX PI D'andrea A, Jones SS, Wong GG;
XX XX
XX DR WPI; 1994-025409/03.
XX DR N-PSDB; AA03394.
XX XX
XX PT Recombinant DNA encoding erythropoietin receptor - used to
XX PT develop prods. for study, treatment or diagnosis of disorders in
XX PT which receptor is dysfunctional
XX PS Disclosure; Fig 2; 24pp; English.
XX XX
XX CC Mouse erythroleukemia (MEL) cells were used to construct a cDNA
XX CC library. The cDNA was used to transfect COS-1 cells and these were
XX CC screened for radiolabeled erythropoietin (EPO) binding to isolate
XX CC cDNA encoding the EPO receptor. The cDNA may be used to isolate the
XX CC EPO receptor from other sources and to study, treat or diagnose
XX CC disorders in which the EPO receptor is dysfunctional. The EPO
XX CC receptor may also be used to raise antibodies for treating
XX CC hypersensitivity to EPO or who have elevated levels of EPO. The prod.
XX CC is pref. used for treating anaemias, primary proliferative polycythemia
XX CC and secondary polycythemia.
XX CC See also AAR47518.
XX XX
XX SQ Sequence 507 AA;

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Query Match 79.2%; Score 869.5; DB 15; Length 507;
 Best Local Similarity 77.7%; Pred. No. 2.5e-85;
 Matches 164; Conservative 22; Mismatches 24; Indels 1; Gaps 1;

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1 KFEKSAALLAARPEELCTERLELDVCFEEAASAGVGPNGFSFQLEDEPMKLCRL 60
|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
34 kfeskaallasrseelctqrlcdvctweeaaasgm-dfynsfyqlgegrkskscl 92
Db hgaptvrgsvrfwscslptadtssfpvlelrltaasgarpfhrvIHINEVLLDAPVGLA 120
QY 61 HQAPTARGAIRFCWSPLEADTSSFPVLELRLTAASGARPFRHVIHINEVLLDAPVGLA 120
|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
121 RLADSEGHVIRNLPPEETWMTSHIRELDISAGNGASVQRYVLLDGRTECVLSNRGR 180
Db 153 rraegshvvlrwlppqagmtlthryevdvsagrnragtqrvevlegrtcvlsnlrg 212
QY 181 TRITIAVRAMAPSEFCGFSAMSEPSILT 211
|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
213 tritfavrmaeprsfsgtwsawsepasilc 243

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RESULT 14
ID AAR69502
XX AC AAR69502 standard; Protein; 507 AA.
XX AC AAR69502;
XX DT 10-AUG-1995 (first entry)
XX DE Mouse erythropoietin receptor.
XX KW Erythropoietin receptor; anemia therapy; signal peptide;
XX KW transmembrane region; N-linked glycosylation.
XX OS Mus musculus.
XX XX
XX FH Key Location/Qualifiers
XX FT Peptide 1..24
XX FT Protein /note= "signal peptide"
XX FT Modified-site 25..507
XX FT Modified-site /note= "mature protein"
XX FT Domain /note= "N-linked glycosylation site"
XX FT Modified-site /note= "transmembrane region"
XX FT /note= "N-linked glycosylation site"
XX PN US5378808-A.
XX XX
XX PD 03-JAN-1995.
XX PF 03-FEB-1989; 89US-0306503.
XX PR 03-FEB-1989; 89US-0306503.
XX PR 25-MAR-1991; 91US-0678877.
XX PR 10-JUN-1993; 93US-0075069.
XX PA (GEM ) GENETICS INST INC.
XX PI D'andrea A, Jones SS, Wong GG;
XX XX
XX DR WPI; 1995-051310/07.
XX DR N-PSDB; AA081891.
XX XX
XX PT New recombinant erythropoietin receptor polypeptide(s) - used for
XX PT detection, purification, and therapy and for prodn. of antibodies for
XX PT detection and therapy
XX PS Claim 1; Fig 2; 24pp; English.
XX XX
XX CC The sequence corresponds to a mouse erythropoietin receptor,
XX CC including putative signal peptide and transmembrane regions, and 2
XX CC N-linked glycosylation sites. The protein is derived from mouse
XX CC erythroleukemia cells and may be used in drug design or in
XX CC pharmaceutical compositions for therapy of anemia.
XX XX
XX SQ Sequence 507 AA;

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Query Match 79.2%; Score 869.5; DB 16; Length 507;
 Best Local Similarity 77.7%; Pred. No. 2.5e-85;
 Matches 164; Conservative 22; Mismatches 24; Indels 1; Gaps 1;

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1 KFEKSAALLAARPEELCTERLELDVCFEEAASAGVGPNGFSFQLEDEPMKLCRL 60
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34 kfeskaallasrseelctqrlcdvctweeaaasgm-dfynsfyqlgegrkskscl 92
Db hgaptvrgsvrfwscslptadtssfpvlelrltaasgarpfhrvIHINEVLLDAPVGLA 120
QY 61 HQAPTARGAIRFCWSPLEADTSSFPVLELRLTAASGARPFRHVIHINEVLLDAPVGLA 120
|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
121 RLADSEGHVIRNLPPEETWMTSHIRELDISAGNGASVQRYVLLDGRTECVLSNRGR 180
Db 153 rraegshvvlrwlppqagmtlthryevdvsagrnragtqrvevlegrtcvlsnlrg 212
QY 181 TRITIAVRAMAPSEFCGFSAMSEPSILT 211
|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
213 tritfavrmaeprsfsgtwsawsepasilc 243

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